SEQUENCE LISTING <110> GRAUS, Yvo KOPETZKI, Erhard KUENKELE, Klaus-Peter MUNDIGL, Olaf PARREN, Paul REERS, Frank SCHUMACHER, Ralf Van de WINKEL, Jan Van VUGT, Martine <120> Antibodies against insulin-like growth factor I receptor and uses thereof <130> 21655 US2 <150> US 60/459,837 <151> 2003-04-02 <150> US 60/463,003 <151> 2003-04-15 <160> 10 <170> PatentIn version 3.2 <210> 1 <211> 119 <212> PRT <213> Homo sapiens <400> 1

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly

1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Arg Asn Tyr
20 25 30

Ala Met Tyr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Ala Ile Gly Ser Gly Gly Gly Thr Tyr Tyr Ala Asp Ser Val Lys 50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu 65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala 85 90 95

Arg Ala Pro Asn Trp Gly Ser Asp Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser

<210> 2

<211> 107

<212> PRT

<213> Homo sapiens

<400> 2

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Glu Lys Ala Pro Lys Ser Leu Ile 35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro 65 70 . 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Pro Pro 85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys \$100\$

<210> 3

<211> 119

<212> PRT

<213> Homo sapiens

<400> 3

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Arg Ser Tyr 20 25 30

Ala Met Tyr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

35 40 45

Ser Ala Ile Gly Ser Gly Gly Gly Thr Tyr Tyr Ala Asp Ser Val Lys 50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu 65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala 85 90 95

Arg Ala Pro Asn Trp Gly Ser Asp Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser 115

<210> 4

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

1 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Glu Lys Ala Pro Lys Ser Leu Ile

35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Pro Pro 85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys \$100\$

<210> 5

<211> 119

<212> PRT

<213> Homo sapiens

<400> 5

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Asn Tyr
20 25 30

Ala Met Tyr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Ala Ile Gly Ser Gly Gly Gly Thr Tyr Tyr Ala Asp Ser Val Lys 50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu 65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr His Cys Ala 85 90 95

Arg Ala Pro Asn Trp Gly Ser Glu Ala Phe Asp Ile Trp Gly Gln Gly 100 105 110

Thr Met Val Thr Val Ser Ser 115

<210> 6 <211> 107 <212> PRT

<213> Homo sapiens

<400> 6

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

1 5 ,10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Glu Lys Ala Pro Lys Ser Leu Ile 35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Pro Ile 85 90 95

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105

<210> 7

<211> 990

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(990)

<400)> 7	7														
gcc	tcc	acc	aag	ggc	cca	tcg	gtc	ttc	ccc	ctg	gca	ccc	tcc	tcc	aag	48
Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	
1				5					10					15		
agc	acc	tct	ggg	ggc	aca	gcg	gcc	ctg	ggc	tgc	ctg	gtc	aag	gac	tac	96
Ser	Thr	Ser	_	Gly	Thr	Ala	Ala		Gly	Cys	Leu	Val	_	Asp	Tyr	
			20					25					30			
++~		~~~	~~~	~+~		~+~	+~~	+~~	222	+00	~~~	~~~	a+ ~	200	200	1 4 4
		_	_	gtg	_	-	_						-		_	144
Pne	PIO	35	PIO	Val	1111	Val	40	пр	ASII	Ser	СТУ	45	Leu	TIIL	ser	
		23					40					40				
aac	ata	cac	acc	ttc	ccq	qct	qtc	cta	caq	tcc	tca	qqa	ctc	tac	tcc	192
				Phe	_	-	-		_							
-	50					55					60	-		_		
ctc	agc	agc	gtg	gtg	acc	gtg	ccc	tcc	agc	agc	ttg	ggc	acc	cag	acc	240
Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	
65					70					75					80	
tac	atc	tgc	aac	gtg	aat	cac	aag	ccc	agc	aac	acc	aag	gtg	gac	aag	288
Tyr	Ile	Суѕ	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	
				85					90					95		
																226
				aaa												336
Lys	Val	Glu		Lys	Ser	Cys	Asp	_	Tnr	HIS	Thr	Cys		Pro	Cys	
			100					105					110			
cca	aca	cct	gaa	ctc	cta	aaa	gga	cca	tca	atc	ttc	ctc	ttc	ccc	cca	384
	•		-	Leu	_			-		_						001
110	7114	115	O.L.u	Dea	LCu	O _T	120	110.	001		1110	125				
aaa	ccc	aag	gac	acc	ctc	atg	atc	tcc	cgg	acc	cct	gag	gtc	aca	tgc	432
Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Суз	
	130					135					140					
gtg	gtg	gtg	gac	gtg	agc	cac	gaa	gac	cct	gag	gtc	aag	ttc	aac	tgg	480
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lvs	Phe	Asn	Trp	

145					150					155					160	
tac	gtg	gac	ggc	gtg	gag	gtg	cat	aat	gcc	aag	aca	aag	ccg	cgg	gag	528
Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	
				165					170					175		
gag	cag	tac	aac	agc	acg	tac	cgt	gtg	gtc	agc	gtc	ctc	acc	gtc	ctg	576
Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	
			180					185					190			
cac	cag	gac	tgg	ctg	aat	ggc	aag	gag	tac	aag	tgc	aag	gtc	tcc	aac	624
His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	
		195					200					205				
aaa	acc	ctc	сса	gcc	ccc	atc	gag	aaa	acc	atc	tcc	aaa	acc	aaa	aaa	672
	•			Ala									_			
_, _	210	200				215	014	_,_			220	-1-		-10	1	
can	CCC	cga	gaa	cca	cag	ata	tac	acc	cta	ccc	сса	tcc	caa	gat	gag	720
_		_	_	Pro												
225	110	9	O.L.	110	230		- , -		200	235		202	9	1101	240	
225					250					255					210	
cta	acc	aaq	aac	cag	atc	agc	cta	acc	tqc	ctq	qtc	aaa	ggc	ttc	tat	768
-		_		Gln	-	-										
		-1-		245					250			-1-		255	-3-	
gge	age	gac	atc	gcc	ata	gan	tan	gag	age	aat	gaa	caa	cca	gag	aac	816
	-	-		Ala												
			260				F	265			1		270			
			200					200					2,0			
220	tac	aan	acc	acg	cct	ccc	ata	cta	aac	tcc	gac	aac	tcc	ttc	ttc	864
		-		Thr												001
ASII	ıyı	275	1111	1111	110	110	280	Бец	мэр	Jei	пор	285	DCI	1110	1110	
		275					200					203				
at a	tac	200	224	ctc	300	ata	asc	220	200	200	+~~	C2.0	Cad	aaa	220	912
		_	-	Leu			_	-	-			-	-			J 1 2
ьeu		Set	րչ	neu	TIIT		rah	пуз	SET	ALY		GIII	9111	g T Å	USII	
	290					295					300					
~+~	++~	+	+~~	+~~	~+~	a+~	aa+	~~~	ac+	a+~	020	220	C2.C	tac	3.00	960
gcc	LCC	ıca	Lgc	tcc	gicg	acg	Cal	yag	yct	cly	cac	aac	cac	Lac	acy	960

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr 305 310 315 320

cag aag agc ctc tcc ctg tct ccg ggt aaa Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys 325 330 990

<210> 8

<211> 330

<212> PRT

<213> Homo sapiens

<400> 8

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys

1 10 15

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr 20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser 35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser 50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr 65 70 75 80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys 85 90 95 Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu . 170 Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr

260 265 270 Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe 275 280 285 Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn 300 290 295 Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr 305 310 315 320 Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys 330 325 <210> 9 <211> 321 <212> DNA <213> Homo sapiens <220> <221> CDS (1)..(321) <222> <400> 9 cga act gtg gct gca cca tct gtc ttc atc ttc ccg cca tct gat gag 48 Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu 15 1 5 10 cag ttg aaa tct gga act gcc tct gtt gtg tgc ctg ctg aat aac ttc 96

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn

30

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe

25

20

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu

1 5 10 15

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
20 25 30

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln 35 40 45

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser 50 55 60

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu 65 70 75 80

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser 85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys \$100\$